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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,305	01/25/2007	Dieter Lehmann	P29884	5161
7055	7590	01/21/2010		
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER BERMAN, SUSAN W	
			ART UNIT 1796	PAPER NUMBER
			NOTIFICATION DATE 01/21/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,305	<b>Applicant(s)</b> LEHMANN ET AL.	
	<b>Examiner</b> /Susan W. Berman/	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11-30-09</u>  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Amendment***

The rejection of claims 1-22 under 35 U.S.C. 112, second paragraph, is withdrawn.

***Response to Arguments***

Upon reconsideration, the rejection of claims 1-7 as being anticipated by Wozny et al (6,040,370) is withdrawn. Applicant points out that Wozny et al do not describe a (co)polymer radically coupled to PTFE powder. Wozny et al state that the polymers are “associated” (column 5, line 63, to column 6, line 8).

Applicant’s arguments filed 11-30-2009 with respect to the disclosures of Molinski et al, Kerbow et al and Coates et al are unpersuasive. With respect to the rejection of claims over Molinski et al, applicant has not provided any evidence or convincing argument to establish that the products obtained by Molinski et al wherein the PTFE is irradiated in the presence of the monomers, as in the examples, is significantly different from the instantly claimed product. Furthermore, Molinski et al teach that pre-irradiating the substrate before bringing it into contact with the substrate is also a useful process.

With respect to Kerbow et al, although Kerbow employs copolymers of TFE in the examples, PTFE is taught as an alternative fluoropolymer. Applicant argues that Kerbow et al teach grafting wherein only one monomer, i.e. maleic anhydride, is present on the polymer surface. This monomer would be expected to form a grafted on homopolymer, corresponding to the homopolymer set forth in the instant claims.

With respect to Coates et al, the examiner has not noted any disclosure of a core-shell product. Table 4 has been considered. The data in Table 4 is for aluminum panels coated with

Art Unit: 1796

surface treated fluoropolymer powders and reports the adhesion, etc. of the powders to the aluminum, not the adhesion of the macromolecules to the powder.

Applicant's arguments have been addressed by additional detail added to the rejections set forth herein below.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1, as written, requires a polytetrafluoroethylene polymeric powder product having polymers radically bonded to the surface. While the claim sets forth that the PTFE powder is radiation-chemically modified or plasma-chemically modified and that the polymers are bonded via a reaction in dispersion or solid, the claim reads on a polytetrafluoroethylene polymeric powder having polymers radically bonded to the surface produced by a different method.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Molinski et al (4,385,130). Molinski et al disclose grafting monomers corresponding to those claimed by applicant, such as styrene and maleic anhydride, grafted to polytetrafluoroethylene powder by

Art Unit: 1796

irradiation of the materials in a suspension. See column 3, lines 20-65 and column 4, lines 32-38.

The process wherein a mixture of a vinyl monomer and an “active” monomer, such as a monomer having carboxylic acid groups, forms a side chain on a polymeric fluorocarbon substrate is taught from column 4, line 65, to column 5, line 12. Molinsky teaches that all known methods of radiation grafting can be employed, such as pre-irradiating the substrate before bringing it into contact with the substrate (column 5, lines 36-57). See Examples 6-8 and 13-18. A gamma radiation dose of 1.125 Mrad, or 11.25 kGy, was employed.

The instant claims are drawn to a product comprising polytetrafluoroethylene powder having homopolymer, copolymers or terpolymer radically coupled on the surface of the powder. The prior art products wherein the radiation grafting comprises pre-irradiating the PTFE powder substrate prior to grafting, in particular, would be expected to have the same structure and properties as the instantly claimed radically coupled PTFE polymers. The claims are considered to be anticipated by the disclosed polytetrafluoroethylene powder having grafted thereon copolymeric side chains of a vinyl monomer and an “active” monomer in the absence of evidence to show that the prior art grafted fluoropolymers have different structures or properties than the instantly claimed radically coupled polytetrafluoroethylene polymers.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kerbow et al (5,576,106). Kerbow et al teach that fluoropolymers useful as bases for grafted fluoropolymer powders include polymers of fluorine-containing monomers such as perhalogenated monomers including fluoroolefins having 2-8 carbon atoms (column 2, lines 49, to column 3, line 20). Kerbow et al teach that the desired characteristics of the ethylenically unsaturated grafting

Art Unit: 1796

monomer is the ability to migrate to activated sites on the fluoropolymer particles surface during the grafting process, thus teaching that the fluoropolymer has activated sites during the grafting process (column 3, lines 47, to column 4, line 14). Kerbow et al disclose surface grafted fluoropolymer powders (column 4, lines 50-59). The fluoropolymers are in finely-divided particulate form for grafting. Grafting monomers are taught in column 4, lines 1-14. Irradiation of the fluoropolymer in the presence of the monomer with 2-6 Mrad is disclosed in column 4, lines 21-22 and column 4, line 60, to column 5, line 7, and the Examples.

Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Coates et al (6,824,872). Coates et al disclose fluoropolymer powder particles surface treated by coating with macromolecules to change the chemical functionality. Treatment with a macromolecular chemical species and an atmospheric plasma treatment or radiation treatment is taught. A process comprising coating particles of the fluoropolymer powder with macromolecules and subjecting the coated particles to a process that immobilizes the macromolecules on the surface of the powder particles (column 2, line 46, to column 3, line 16). Coates et al teach that the molecule is “attached to the surface of the polymer powder particles” and that the “macromolecule develops a strong physical interaction with the fluoropolymer powder surface, which surprisingly becomes irreversible...after the crosslinking” (column 5, lines 10-34). Example 3 discloses tests to determine the amount of surface material that is neither covalently attached nor permanently adsorbed on the fluoropolymer powder. Figure 1 shows that the amount of PEG attached (covalently attached) to the polymer increases as treated PTFE is repeatedly passed through the

Art Unit: 1796

atmospheric plasma treatment. This Example provides evidence of covalent bonding of the macromolecules to the powder particles.

The burden is hereby shifted to applicant to establish by effective argument and/or objective evidence that the prior art product(s) or process(es) do not necessarily possess the characteristics of the claimed products or processes. Note In re Marosi, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See MPEP 2113. The reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in the product by process claim, although produced by a different process. Note In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990), “When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not”.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

Art Unit: 1796

with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-26 of copending Application No. 10/577,300. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instantly claimed polytetrafluoroethylene is a species of the perfluoropolymer set forth in the claims of 10/577300, which include claim 5 reciting PTFE. It would have been obvious to one skilled in the art at the time of the invention to employ PTFE as the perfluoropolymer in the claimed product or method of 10/577,300.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/577,619. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims recite a radically coupled PTFE that includes PTFE radically coupled with polymers that encompass the species of radically coupled PTFE polymers coupled with olefinically unsaturated polymers set forth in the claims of '619.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.



Art Unit: 1796

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB  
1/16/2010

/Susan W Berman/  
Primary Examiner  
Art Unit 1796